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Overall System Characteristic of Information System to Manage R&D at National Academy of Pedagogical Science of Ukraine

Goals and Objectives. The goals of the Information System to manage R&D at National Academy Pedagogical Science of Ukraine (hereinafter “R&D management” IS) is to support the automation of documentary support for R&D management at research institutions in accordance with the state regulations in research. It should be provide the access to a single data storage uploaded by R&D management documents to officers and researchers in the Presidium and Research Institutions of National Academy Pedagogical Science of Ukraine (hereinafter NAPSU) based on the permissions policy according to their powers.

The “R&D management” IS objectives are to design system as a corporate Internet portal <http://planning.edu-ua.net> and based on Microsoft Office SharePoint Server 2007 platform. The front end portal is designed as SharePoint site. The back end portal is the SharePoint basic tools for documents and workflows added applications, document templates and intelligent interfaces developed specifically for IS “R&D management to support NAPSU”.

“R&D management” IS is the first stage to create the corporate portal for electronic document management at NAPSU with the whole range of document workflow functions. Such systems will provide technical background for migration from paper or partly automated R&D management to a fully automated one. This migration is particularly timely because at state level in Ukraine there are normative base and regulated structure of electronic documents and order of their treatment already. Since this problem is not solved at NAPSU creating of the IS “R&D management” will be practical step to implement the state ICT policy to management education. The IS “R&D management” essentially will promote the everyday use of ICT, reduce terms to prepare and process R&D documents, will raise the technological performers culture to manage R&D and it will be thus more rational use of labor resources in the organization and implementation of the Research.

Subject domain of the “R&D management” IS. The main activity of Institutions of NAPSU is scientific research. Currently the research management is running through paper documents that are sent in a few copies from Research Institutions to Presidium of NAPSU. The research management in Research Institutions of NAPSU is regulated by "Statute about implementation of researches in the National Academy of Pedagogical Sciences of Ukraine" document (release 2011). This Statute is developed under the laws of Ukraine "On scientific and scientific and technical activity", "About scientific and scientific and technical examination", "About innovative activity", State standard of Ukraine SSTU a 3973-2000 "System of development and imputing of products on a production. Rules of implementation of research works. Generals", Charter of the National Academy of Pedagogical Sciences of Ukraine and other normatively-legal acts that regulate relations in a scientific field. Statute defines the basic principles to manage research in Institutions of NAPSU and sets general requirements to R&D: applications, approval, budget, monitoring, accounting, reporting, results assessment and acceptance criteria. The action of Statute spreads to all fundamental and applied researches that are planned and performed in Institutions of NAPSU by funds of the state budget and due to other sourcing.

Types of document in the “R&D management” IS. An R&D document is prepared in the Institute of NAPSU by R&D top managers, officials Academic Department and accouters:

- R&D top managers prepare the following documents:
- R&D application;
- Requirement Specification R&D;
- Description R&D for NANU;
- Agreement Vendor R&D;
- Research Program R&D;
- Registration Card R&D;
- Plan and Terms of R&D.
- Officials Academic Department prepare the following documents:
- Perspective Thematic Plan of R&D;
- Annual Plan of R&D;
- Extract from minutes of Academic Council Meeting;

- to approve R&D;
- to approve Perspective Thematic Plan of R&D;
- to approve Perspective Thematic Plan of R&D;
- to approve Research Program R&D.

Accountants prepare the following documents:

- The Planned Calculation of the estimated cost of work for each topic of R&D (includes cost estimates for all items);
- Protocol Agreement the cost of work for each topic of R&D;
- Actual Costs of the institution monthly, quarterly;
- Summary Cost estimates in all subjects R&D.

Following supporting papers are used to complete documents that R&D top managers prepare:

- Overall about NAPSU;
- Resolutions of the Presidium of NAPSU;
- Overall about Departments of NAPSU;
- Protocols of the Bureau of the Department of NAPSU;
- Log of R&D;
- Overall about Research Institutions of NAPSU;
- Staff list of the Research Institution of NAPSU.

“R&D management” IS Requirements. “R&D management” IS should support the comfortable environment of collective activity to manage R&D and effective automated procedures of management documents (forming, access, synchronization of changes and others like that). Thus “R&D management” IS belongs to a class of systems of electronic documents management (EDM). The defined feature of this class is to provide the document management and group work with documents. A management documents requires the specific processing procedures corresponding to the specific document types and tools to support the depository documents. A group work with documents should be determined by politics of permissions and roles of users.

These fundamental requirements for electronic documents management are the basis of design decisions “R&D management” IS.